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(21) International Application Number: PCT/US99/25427 (22) International Filing Date: 29 October 1999 (29.10.99) (30) Priority Data: 09/181,859 29 October 1998 (29.10.98) US <i>29 Apr 01/30 nos</i> (71) Applicant (for all designated States except US): PHILIP MORRIS INCORPORATED [US/US]; 120 Park Avenue, New York, NY 10017 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): <input checked="" type="checkbox"/> KOLLER, Kent, B. [US/US]; 8401 Kintail Drive, Chesterfield, VA 23838 (US); WRENN, Susan, E. [US/US]; 12130 Ivy Mill Road, Chesterfield, VA 23832 (US); HOUCK, Willie, G., Jr. [US/US]; 7753 Lake Forrest Drive, Richmond, VA 23235 (US); PAINE, John, B., III [US/US]; 13630 Trilithon Road, Midlothian, VA 23235 (US). (74) Agent: SKIFF, Peter, K.; Burns, Doane, Swecker & Mathis, L.L.P., P.O. Box 1404, Alexandria, VA 22313-1404 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>

(54) Title: FILTER FOR SELECTIVE REMOVAL OF A GASEOUS COMPONENT**(57) Abstract**

A filter such as an air having a reagent which chemically reacts with and removes a gaseous component of an air stream. The reagent contains functional groups covalently bonded to a non-volatile inorganic substrate which is incorporated in the filter. The filter can remove gaseous components such as aldehydes. Preferred functional groups are 3-aminopropylsilyl groups covalently bonded to silica gel (APS silica gel). The reagent can be contained in a space in the filter or incorporated in one or more filter elements. The reagent can be part of or coated on paper such as filter paper or incorporated in non-paper filter elements formed from fibrous materials such as cellulose acetate or polypropylene fibers. Other preferred reagents include aminoethylaminopropylsilyl silica gel (AEAPS) and aminoethylaminopropylsilyl silica gel (AEAEAPS).